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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,082	03/06/2002	Michael E. Cotto	006-241-300	8490

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DALY, CROWLEY, MOFFORD & DURKEE, LLP
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EXAMINER

ADDIE, RAYMOND W

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,082

Applicant(s)

COTTO, MICHAEL E.

Examiner

Raymond W. Addie

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13,14 and 16-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13,14 and 16-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohl # 2,574,932 in view of Stearns # 123,369.

Nohl discloses a special purpose rake comprising:

An elongate handle (26).

A holder (30) secured to an end of the handle.

A elongate rake head (4), secured in a fixed angular position relative to the handle (26),
via holder (30).

A plurality of linear tines (12) extending from the rake head (4), said tines being capable
of grading particulate matter.

Said tines having truncated ends (18) forming an angle of approximately 30⁰ with the
longitudinal axis of the tines.

What Nohl does not disclose is the angular disposition of the tines of the truncated
ends, relative to the handle.

However, Stearns teaches and clearly illustrates it is known to dispose rake-tines at
approximately a 60⁰ angle relative to the handle (F). Therefore, it would have been
obvious to one of ordinary skill in the art, at the time the invention was made to provide

the rake of Nohl, with acutely disposed tines, relative to the handle, as taught by Stearns in order to provide "the proper degree of inclination of the rake handle with the rake-teeth". As clearly stated by Stearns, see Col. 1, Ins. 7-11.

2. Claims 14, 16, 18-20, 22, 24, 25, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nohl # 2,574,932 in view of Stearns # 123,369 as applied to claim 13 above, and further in view of Milbury # 6,131,381.

Nohl in view of Stearns discloses a multi-purpose rake having tines, a head and an elongate handle. The head having apertures for receiving fasteners (h), intended to secure the rake head to the holder. What Nohl in view of Stearns do not disclose is the use of cylindrical rake heads and tines. However, Milbury teaches it is known to make rakes comprising cylindrical heads (130), cylindrical tines (170), a head holding device (150) having a curved surface (132) complementing a surface of said rake head (130). Said rake head having a plurality of holes for receiving said cylindrical tines (170), see Figs. 1, 1A. Further, Milbury teaches it is desirable to dispose the truncated ends of the tines substantially parallel with a longitudinal axis of an elongate handle (120), such that the rake can be used in a "pushing mode". Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the rake of Nohl in view of Stearns, with the rake head assembly taught by Milbury, in order to selectively adjust, in a fixed manner, the angular disposition of the tines, relative the handle; thereby increasing the utility of the rake. See Col. 20, Ins. 9-15.

In regards to claims 24, 25, 27 Millbury discloses the tines are spaced about 7/8" apart and are made of a stiff but flexible polymer. See col. 11, ln. 19-col. 12, ln. 67.

Although Millbury does not disclose to what extent the reinforced thermoplastic tines (170) will flex, without breaking, Millbury clearly illustrates in Figs. 14a, 14b, 15a, 15b the tines (170) are clearly intended to flex, without breaking, and further discloses "assisted by the flexible resilience of the material composing tine (170) thereby minimizing stresses" developed in the tines. In col. 17, lns. 60-62. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the rake of Nohl in view of Stearns, with tines that can flex without breaking, as taught by Millbury, in order to minimize stresses developed in the rake tines, as reasonably suggested by Millbury.

3. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nohl # 2,574,932 in view of Stearns # 123,369 and Milbury # 6,131,381 as applied to claim 19 above, and further in view of Fuller # 1,577,065.

Nohl in view of Stearns and Milbury disclose a grading rake having a plurality of tines secured to an elongate cylindrical head; as well as the use of a plurality of fasteners, such as bolts, rivets and the like for attaching various rake components together, see col. 10, lns. 10-45. But doe not disclose using fasteners for securing the tines to the rake head.

However, Fuller '065 discloses a lawn tool having a plurality of tines (13) removably secured to a cylindrical rake head (10/1 1) by a plurality of removable fasteners (12). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the rake of Nohl in view of Stearns and Milbury with a plurality of removable fasteners, as taught by Fuller '065, in order to facilitate replacing broken or worn tines. See Fuller, Figs 1, 5.

4. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nohl # 2,574,932 in view of Stearns # 123,369 and Milbury # 6,131,381 as applied to claim 22 above, and further in view of Judy # 4,270,614.

Nohl in view of Stearns and Milbury disclose a grading rake having plastic tines, that have a diameter of at least 3/16" dependent upon the material of the tine. However, Judy teaches it is common to provide stone rakes with tines (46) having a diameter between 3/16"-1/2" in diameter in order to remove small stones, sticks that would otherwise interfere with a finished landscape.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the rake device of Nohl in view of Stearns and Milbury, with at least 1/4"-1/2" diameter tines, as taught by Judy, in order to provide the necessary raking action desired; as reasonably suggested by Millbury and Judy. See col. 5, Ins. 35-65 of Judy; Millbury col. 12, ln. 46-col. 13, ln. 9.

5. Claim 26, is rejected under 35 U.S.C. 103(a) as being unpatentable over Nohl # 2,574,932 in view of Stearns # 123,369 and Milbury # 6,131,381 as applied to claim 25 above, and further in view of Guidarelli 5,142,855.

Nohl in view of Stearns and Milbury disclose a rake having metal or thermoplastic tines, but do not disclose the use of nylon tines. However, Guidarelli # 5,142,855 teaches it is desirable to make rake tines (26) from metal or Nylon. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the rake device of Nohl in view of Stearns and Milbury from Nylon, as taught by Guidarelli, since Guidarelli, teaches the two materials are equivalent. See col. 1 , Ins. 61-67.

6. Claims 28, 29, 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Milbury # 6,131,381 in view of Stearns # 123,369.

Milbury discloses a grading rake (100) comprising:

A handle (120).

A holder (150) secured, as by fastener (124) to said handle.

A substantially cylindrical rake head (130) disposed transversely to said handle.

A plurality of tines (170) extending from holes (164) in the rake head (130).

Wherein the interior angle between the tines and the longitudinal axis of the handle, can be adjusted in a plurality of fixed, angular orientations, such that a truncated end of said

tines (170) can be disposed substantially parallel to said handle axis. What Milbury does not explicitly disclose is fixing the tines at an angle of 30° -approximately 60° relative to said handle. However, Stearns teaches and clearly illustrates it is known to dispose rake-tines at approximately a 60° angle relative to the handle (F).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the rake of Nohl, with acutely disposed tines, relative to the handle, as taught by Stearns in order to provide "the proper degree of inclination of the rake handle with the rake-teeth". As clearly stated by Stearns, see Col. 1, Ins. 7-11.

In regards to claims 32, 33 Milbury discloses it is known to secure the rake tines (170) to the handle via a plurality of removable fasteners (124, 132) in the form of bolts, screws and the like. Milbury further discloses the use of flexible polymer tines (170), which obviously can flex without permanently deforming, due to the resiliency of the polymer forming the tines (170). See Col. 5, Ins. 7-17.

7. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Milbury # 6,131,381 in view of Stearns # 123,369 as applied to claim 28 above, and further in view of Nohl # 2,574,932.

Milbury in view of Stearns disclose a grading rake having plastic tines and truncated ends. What Milbury in view of Stearns do not disclose is an angled, truncated tine end.

However, Nohl teaches it is known to provide rake tines having truncated ends (18) forming an angle of approximately 30^0 with the longitudinal axis of the tines, such that said tines ride easily over the material being raked, as the rake is worked forward and backward from the user. See Col. 2, Ins. 5-8.

8. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Milbury # 6,131,381 in view of Stearns # 123,369 as applied to claim 28 above, and further in view of Judy # 4,270,614.

Milbury in view of Stearns disclose a grading rake having plastic tines, that have a diameter of approximately $3/16$ " dependent upon the material of the tine. But does not explicitly recite the use of tines smaller than $9/16$ ".

However, Judy teaches it is common to provide stone rakes with tines (46) having a diameter between $3/16$ "- $1/2$ " in diameter in order to remove small stones, sticks that would other-wise interfere with a finished landscape.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the rake device of Milbury in view of Stearns, with at least $1/4$ "- $1/2$ " diameter tines, as taught by Judy, in order to provide the necessary raking action desired; as reasonably suggested by Millbury and Judy. See col. 5, Ins. 35-65 of Judy; Millbury col. 12, In. 46-col. 13, In. 9.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Milbury # 6,131,381 in view of Stearns # 123,369 and Judy # 4,720,614 as applied to claim 35 above, and further in view of Guidarelli 5,142,855.

Milbury in view of Stearns and Judy disclose a rake having metal or thermoplastic tines, but do not disclose the use of nylon tines. However, Guidarelli # 5,142,855 teaches it is desirable to make rake tines (26) from metal or Nylon. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the rake device of Millbury in view of Stearns and Judy from Nylon or metal, as taught by Guidarelli, in order to increase the resiliency of the tines, thereby improving raking action. See col. 1 , Ins. 61-67.

10. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Milbury # 6,131,381 in view of Stearns # 123,369 and Guidarelli 5,142,855.

Millbury discloses a method of grading particulate matter comprising:

Pushing particulate matter with a rake;

Pulling the particulate matter with the rake such that cylindrical tines extending from a rake head flex a free end such that the tines separate relatively large particles from smaller particles, wherein a truncated end surface of the tines travels across a surface of the particulate matter, and are substantially parallel to the longitudinal axis of a handle (120).

Although Millbury discloses any desirable angle can be formed between the tines and the handle, Milbury does not explicitly recite an interior angle of approximately 30-60°. However, Reithel teaches a grading rake wherein the tines form an angle of about 60 degrees, with a handle of the rake. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the rake of Millbury, with tines disposed at an acute angle, as taught by Reithel, in order to provide the most efficient raking action possible.

Although Millbury in view of Reithel disclose the tines could be metal or any of a variety of plastic materials, Millbury in view of Reithel do not disclose the use of nylon tines. However, Guidarelli teaches it is desirable to make rake tines (26) from Nylon. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the rake of Millbury in view of Reithel from Nylon, as taught by Guidarelli, in order to increase the resiliency of the rake tines, thereby reducing permanent deformation. See col. 1.

Response to Arguments

11. Applicant's arguments with respect to claims 13, 14, 16-36 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 04/04/05, with respect to Claim 37 have been fully considered but they are not persuasive.

Applicant argues against the reference to Milbury by suggesting Milbury only discloses an obtuse angle A between 130 and 170⁰.

However, the Examiner does not concur.

As clearly seen in Figs. 1, 1A, 3; Milbury clearly illustrates set screw (132) for securing the a cylindrical rake head to a complementary holder, is selectively fixed angular positions. See also col. 10. What Milbury does not explicitly disclose is an interior angle of approximately 30-60⁰. However, Stearns teaches it is known to dispose rake tines, at approximately 60⁰, in order to provide the proper degree of inclination of the tines and handle, relative to a user.

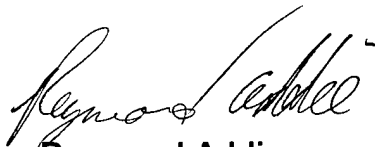
Therefore, the argument is not persuasive and the rejection is maintained.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond Addie whose telephone number is (571) 272-6986. The examiner can normally be reached on Monday-Saturday from 7:00 am to 2:30 pm.

Art Unit: 3671

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached on (571) 272-6998.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Raymond Addie
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Group 3600

RWA
5/25/2005